

ENGINEERING EVALUATION
Tesla
Plant 20459
Banking Application 28622

BACKGROUND

Tesla has submitted this application to bank precursor organic compound (POC) emission reduction credits (ERCs) at the following sources:

- S-1072 General Cleaning & Paint Cleaning, Plastic Paint Shop Wipe Cleaning**
- S-1810 Cleaning Material, South Paint Shop Booth and Wipe Cleaning**
- S-30960 General Cleaning & Paint Cleaning, North Paint Shop Booth and Wipe Cleaning**

These sources are located at Plant 20459 in Fremont, California. Although Tesla is the current owner of the Fremont facility, the facility has undergone multiple transfers of ownerships. Prior to Tesla, this facility was permitted under New United Motor Manufacturing Inc. (NUMMI) from 1984 to 2010 and General Motors (GM) from 1962 to 1984. The permitting history for each source throughout these ownership changes is outlined in this report.

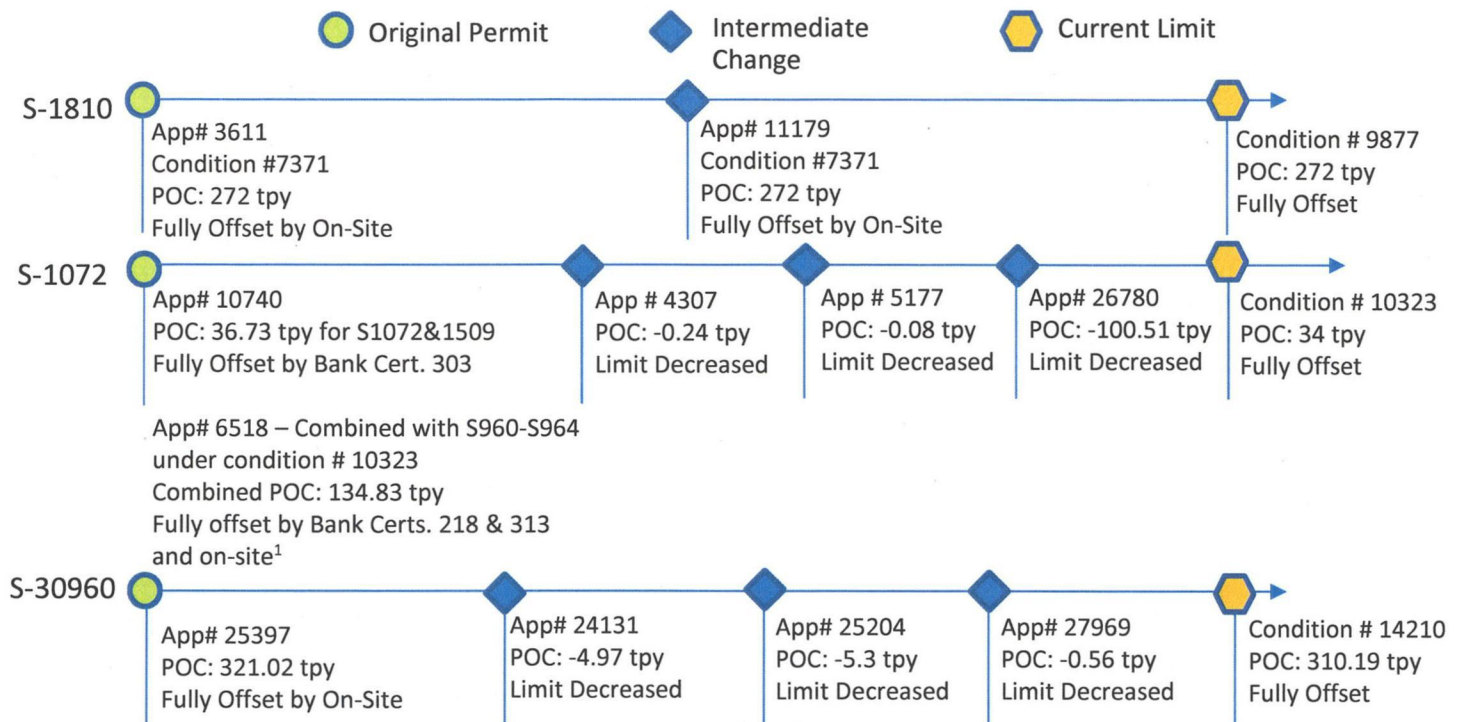
S-1810 was originally permitted under Application #3611 in 1990. As a part of upgrading facility operations, NUMMI shut down the old GM truck line and installed 28 new sources. The decrease in precursor organic emissions (POC) resulting from the shutdown of the GM truck line was used to fully offset the POC emission increase from the new NUMMI sources. S-1810 was one of these new NUMMI sources and, therefore, was fully offset at the time of permitting. S-1810 was originally governed under condition #7371 per Application #3611 with a permitted POC emission limit of 272 tpy. This condition was changed in 1993 per Application # 11179 to account for an increase in solvent cleaning usage. However, there was no change made to the emission limit for the source as NUMMI concurrently implemented a solvent collection system with a greater capture efficiency. This established the current condition #9877 for S-1810 which limits POC emissions from solvent cleaning to 272 tpy.

S-1072 was originally permitted under Application #10740 in 1993 to cover solvent cleaning at a new paint line. The associated POC emission increase from this solvent use was fully offset using emission reductions credits (ERCs) from Banking Certificate No. 313. Per this application, S-1072 shared a POC emission limit of 36.73 tpy with S-1509, Cold Cleaner, under condition #10427. At the same time another application (A#6518) was being processed for several additional solvent cleaning and fugitive sources (S-960 through S-964). Upon issuing a permit for these sources, S1072 & S1509 operations were combined with these source operations under condition# 10323 with a total POC limit of 134.83 tpy. As operations at NUMMI continued to change, the POC emission limit under condition #10323 was lowered in order to offset emission increases from new sources. In addition, many of the sources (S-960 through S-964 and S-1509) were shutdown and archived without adjustment to the permitted POC limit. Finally, in 2015, under permit application 26780 – Title V Renewal, condition #10323 was revised to govern the only source still in operation, S-1072. The POC emission limit was reduced to 34 tpy per the original application calculations (A#10740) and information provided by Tesla concerning current solvent cleaning operations.

S-30960 was originally permitted under Application# 25397 in 1995 to cover solvent cleaning at a new paint line. The associated POC emission increase from this solvent use was fully offset using on-site credit from the shutdown of other sources at the facility. Similar to S-1810, S-30960 was initially permitted under a bubble limit covering emissions from multiple sources. In 2016 the bubble condition #14205 was divided into separate conditions resulting in condition #14210 governing S-30960 with a POC emission limit of 321.02 tpy, again based on emissions calculated when the source was originally permitted under Application # 25397.

Since the facility was transferred to Tesla all new sources have been offset using on-site credit from the reductions in emission limits at existing sources (contemporaneous on-site emission reductions). Per this practice, the POC emission limits in conditions #10323 (S-1072) and #14210 (S-30960) limits have been reduced to 34 tpy and 310.19 tpy as shown in the diagram below.

The diagram below summarizes the POC emissions limit timeline for each source.



¹Offset note for POC emissions from additional sources (S960-964)

Tesla is currently operating at a much lower solvent usage than stated in the current permit conditions for each of these sources. In addition, Tesla is using alternate materials with lower VOC contents resulting in significantly lower POC emissions. To better represent actual solvent cleaning operations, Tesla has proposed the following reductions to their permit conditions:

Condition	Current POC limit (tpy)	POC Decrease (tpy)	New POC Limit (tpy)
9877 (S-1810)	272	270	2.0
10323 (S-1072)	34	31.3	2.7
14210 (S-30960)	310.19	285.49	24.7

EMISSIONS REDUCTION CREDIT CALCULATIONS

Regulation 2, Rule 4 governs Emissions Banking. The emission calculation procedure in Section 2-4-601 refers to the emission calculation procedures in Section 605 of Regulation 2, Rule 2. Per Section 2-2-605.2, for a fully offset source the amount of emission reduction credits is the difference between (i) the source’s potential to emit before the change, adjusted to take into account the most stringent of RACT, BARCT, and applicable federal and District rules and regulations in effect or contained in the most recently adopted Clean Air Plan and (ii) the source’s potential to emit after the change.

S-1072, S-1810, and S-30960 are solvent cleaning sources at a motor vehicle assembly plant which falls under District Regulation 8, Rule 13, Organic Compounds, Light and Medium Duty Motor Vehicle Assembly Plants. This rule does not specify VOC content limits or usage limits for solvents used for surface preparation or cleanup nor does it cite other regulation for further requirements. In addition, in the recently adopted 2017 Clean Air Plan, there are no new rules or regulations being implemented on this category of industry. As a part of determining RACT, other California Air Quality District rules and suggested control techniques by the EPA were researched for applicability and subsequent implementation on similar facilities. No rule or technique applicable to cleaning at motor assembly plants was found to implement a stricter VOC standard and to be practiced by a similar facility. A more detailed discussion of RACT adjustment analysis is presented in Appendix A.

Therefore, in accordance with Section 2-2-602.2, no adjustment was made to the requested emission reduction credits. The final emission reduction credits to be issued are summarized in the table below.

Source	Pollutant	Emission Credit (tons)
S-1810	POC	270.00
S-1072	POC	31.30
S-30960	POC	285.49
Total		586.79

STATEMENT OF COMPLIANCE

The application was determined to be complete as of November 11, 2017. This application was evaluated in accordance with the District regulation in effect on that date.

The ERC calculation was performed in accordance with the procedures outlined in Regulation 2-2-605. The ERCs were calculated based on the fully offset permitted limits for each source.

Regulation 2-2-201 Emission Reduction Credits defines ERCs to be real, quantifiable, enforceable, and permanent. Based on the information Tesla has submitted, the ERC calculations, and the changes to the conditions limiting POC emissions at all three sources, the requirements of this section have been met.

Regulation 2-4-301 Bankable Reductions states that bankable reductions include emission reduction credits such as those due to limitations on throughput. Tesla is accepting revised conditions that reduce the allowable POC emissions effectively limiting throughput at these sources. Therefore, the reduction in emissions are considered bankable emissions.

Regulation 2-4-405 Publication, Public Comment and Inspection requires the District to publish a public notification of the preliminary decision before approving the banking of any emission reduction in excess of 40 tons per year of any pollutant. The requested ERCs in this application exceed 40 tons/yr of POC and this application is therefore subject to this requirement. The requirements of public notice under this rule will be fulfilled by the District before approval and issuance of ERCs.

Applications to deposit emission reductions in the emissions bank pursuant to Regulation 2, Rule 4 are exempt from CEQA as stated in Regulation 2-1-312.10.

CONDITIONS

A change of condition for each applicable condition is required to implement the new POC limits for each source. As discussed previously, these conditions were originally established when NUMMI operated the facility. To better represent the current operation of these sources under Tesla, the facility provided clarification concerning where solvent cleaning is currently taking place and what materials are being used for cleaning. This additional information has been incorporated into the revised conditions below.

Condition # 9877:

~~For S1810, Cleaning Materials:~~

~~1. The solvent usage rate shall not exceed the following:~~

Operation	gals/yr	gal/mo
Wipe & Clean up	17,616	1,832
Cleaning Solvent	164,050	17,061

~~One or more of these usages may increase above the specified limit if there is a corresponding usage decrease for one or more of the solvents, based on controlled emissions so that~~

- ~~—total allowable emissions for this source are not exceeded.~~
- ~~—(basis: Cumulative Increase)~~
- ~~2. Usage records for each of the solvent operations shall~~
- ~~—be kept on a monthly basis. (basis: Cumulative Increase)~~
- ~~3. The VOC emissions from this source shall not exceed~~
- ~~—either of the following:~~
- ~~—28.3 tons/month~~
- ~~—272 tons/year~~
- ~~—(basis: Cumulative Increase)~~

FOR S1810 ~~CLEANING MATERIALS~~
SOLVENT CLEANING AT NORTH PAINT SHOP:
WIPE CLEANING
LINE PURGING
PAINT BOOTH CLEANUP

1. The owner/operator shall not emit more than 2.0 tons of precursor organic compound (POC) during any consecutive twelve-month period from the use of the following cleanup solvents:

Galaxy 980, IPA, and/or Simple Green

~~either of the following:~~

~~28.3 — tons/month~~

~~272 — tons/year~~

~~(Basis: Cumulative Increase)~~

2. The owner/operator may use an alternate cleanup solvent(s) other than the materials specified in Part 1 provided that the owner/operator can demonstrate that all of the following are satisfied:
 - a. Total POC emissions from S-1810 do not exceed 4,000 pounds in any consecutive twelve-month period;
 - b. The use of these materials does not increase toxic emissions above any risk screening trigger level of Table 2-5-1 in Regulation 2-5.

~~(Basis: Cumulative increase, toxic risk screen)~~
3. To determine compliance with the above parts, the owner/operator shall maintain records in accordance with the applicable regulation and provide all of the data necessary to evaluate compliance with the above parts, including the following information:
 - a. Quantities of each type of cleanup solvent used at this source on a monthly basis.
 - b. If a material other than those specified in Part 1 is used, POC and toxic component contents of each material used; and mass emission calculations to demonstrate compliance with Part 2, on a monthly basis;

~~(Basis: Cumulative increase, toxic risk screen)~~

4. The owner/operator shall recover at least 65% of all cleaning solvent. Records of the amounts of solvent recovered shall be kept on a monthly basis. Monthly

excursions below the percent recovery limit are allowed as long as the annual VOC emission limit for cleanup solvent is not exceeded.

(Basis: ~~BACT~~ NESHAP)

Condition #10323:

FOR S-1072

SOLVENT CLEANING AT SOUTH PAINT SHOP:

WIPE CLEANING

PAINT BOOTH CLEANUP

S960 & S961 (ARCHIVED ON SEP 27, 2006),

DELETED (APPLICATION 26780)

S962 & S963 (ARCHIVED ON OCT 21, 2003),

DELETED (APPLICATION 26780)

S964 & S1509 (ARCHIVED ON DEC 31, 2011),

DELETED (APPLICATION 26780)

1. The owner/operator shall not emit more than 2.7 tons of precursor organic compound (POC) during any consecutive twelve-month period from the use of the following cleanup solvents:

Galaxy 980, IPA, and/or Simple Green

~~In no event shall the total annual emissions from the S-1072 from the use of Galaxy 980, IPA, and/or Simple Green exceed 34.0 tons per year of Precursor Organic Compounds (POC).~~

(Basis: Cumulative increase, toxic risk screen)

2. The owner/operator may use an alternate cleanup solvent(s) other than the materials specified in Part 1 provided that the owner/operator can demonstrate that all of the following are satisfied:
 - a. Total POC emissions from S-1072 do not exceed 5,400 pounds in any consecutive twelve-month period;
 - b. The use of these materials does not increase toxic emissions above any risk screening trigger level of Table 2-5-1 in Regulation 2-5.

(Basis: Cumulative increase, toxic risk screen)

3. To determine compliance with the above parts, the owner/operator shall maintain records in accordance with the applicable regulation and provide all of the data necessary to evaluate compliance with the above parts, including the following information:
 - a. Quantities of each type of cleanup solvent used at this source on a monthly basis
 - b. If a material other than those specified in Part 1 is used, POC and toxic component contents of each material used; and mass emission calculations to demonstrate compliance with Part 2, on a monthly basis;

(Basis: Cumulative Increase, Record Keeping)

4. Clean-up solvent usage shall be collected and recovered at 77% or greater. Monthly excursions below the percent recovery limit are allowed as long as the annual VOC emission limit for cleanup is not exceeded.

(Basis: NESHAP)

5. Paint and solvent shall be recovered in an enclosed collection system and shipped to solvent recycle or proper disposal.
(NESHAP)

Condition # 14210

For S30960

WIPE CLEANING AT PLASTIC PAINT SHOP

1. The owner/operator shall not emit more than 24.7 tons of precursor organic compound (POC) during any consecutive twelve-month period from the use of the following cleanup solvents:

Galaxy 980, IPA, and/or Simple Green

(Basis: Cumulative Increase)

2. The owner/operator may use an alternate cleanup solvent(s) other than the materials specified in Part 1 provided that the owner/operator can demonstrate that all of the following are satisfied:
 - a. Total POC emissions from S-30960 do not exceed 49,400 pounds in any consecutive twelve-month period;
 - b. The use of these materials does not increase toxic emissions above any risk screening trigger level of Table 2-5-1 in Regulation 2-5.

(Basis: Cumulative increase, toxic risk screen)

~~309.45 (Per application No. 25204 Part 1) tons per year or 38.68 tons per month of POC, unless the owner/operator notifies the Director of Enforcement within 30 calendar days of such an exceedance and submits a written report with the scheduled, monthly report to demonstrate that the overall North Passenger Paint Shop sources will not exceed the overall emissions limit specified in Part 5 of Condition 14205. (Basis: Cumulative Increase)~~

3. Clean-up solvent usage shall be collected and recovered at 65% or greater (overall), as demonstrated by comparing gross solvent usage records to throughput of solvent recovery tank and/or disposal records. Monthly excursions below the percent recovery limit are allowed as long as the annual VOC emission cleanup is not exceeded.

(Basis: ~~BACT~~, NESHAP)

4. Purged paint and solvent shall be recovered in an enclosed collection system and shipped to a solvent recycler or proper disposal site.

(Basis: ~~BACT~~, NESHAP)

RECOMMENDATION

The District has reviewed the material contained in the permit application for the requested ERCs and has determined that the project is expected to comply with all applicable requirements of District, state, and federal air quality-related regulations.

I recommend that the District proceed with the Public Comment and Inspection procedures for the approval and issuance of **586.79 tons per year of POC** in Emission Reduction Credits at the following sources located at Plant 20459, Tesla, Inc.:

- S-1072 General Cleaning & Paint Cleaning, Plastic Paint Shop Wipe Cleaning**
- S-1810 Cleaning Material, South Paint Shop Booth and Wipe Cleaning**
- S-30960 General Cleaning & Paint Cleaning, North Paint Shop Booth and Wipe Cleaning**



Ariana Husain

February 27, 2018